I. REMARKS

Preliminary Remarks

The applicants would like to thank the examiner for the interview of April 16, 2003, which was extremely helpful in resolving the outstanding issues.

Upon entry of the previous Amendment, claims 16, 17, and 20 will be pending, of which claim 16 is independent. The applicants respectfully request reconsideration and allowance of the present application.

Patentability Remarks

During the interview, the examiner requested an explanation of the significance of the DBP/CTAB ratio, especially in view of a low BET value. The applicants request that the examiner consider the following explanation.

The DBP method is a method for the determination of pore volume not surface area. When silica is treated with DBP, it is absorbed at the surface of the silica by filling into the pores on the surface. In other words, the DBP value of a silica is a measure of the silica's oil absorption capacity (i.e., pore volume determination).

The DBP/CTAB ratio is therefore a ratio between pore volume and surface area and not a ratio between two surface areas. This ratio is an indicator of volume capacity, which in turn influences the dispersibility of a silica. A higher DBP/CTAB ratio indicates better dispersibility. This effect cannot be measured by BET alone because BET only gives information about the surface of the silica.

As indicated in the applicants' earlier responses, the silica of the present invention possesses better dispersibility when compared to the silicas of the prior art, e.g., that of Lagarde *et al.* (U.S. Pat. No. 4,704,425). This effect is indicated by a higher DBP/CTAB ratio as compared to the prior art.

Furthermore, the examiner is correct in his assumption that a silica with a BET value of 240 m^2/g will have a lower DBP/CTAB ratio than a silica with a BET value of 200 m^2/g. This is because increasing a BET value of a silica increases its CTAB value but essentially keeps the DBP value unchanged. The silica of the present invention has a DBP/CTAB ratio of from 1.2 to 3.5. The DBP/CTAB ratio of the silica of Lagarde *et al.* (as in Example 4) was determined to be 1.01 with a BET value of 200 m^2/g. If the BET value were greater than 200

m^2/g, for example 240 m^2/g as shown in Example 4, column 15, line 62, the DBP/CTAB ratio would be even lower than 1.01, and thus further out of the claimed range.

During the interview, the examiner also requested a brief explanation of the differences between the single-point and the multi-point methods for the determination of BET, which the applicants believe is in part responsible for the difference in the BET value obtained by Dr. Görl (200 m^2/g) and the value reported in Example 4 (240 m^2/g).

As mentioned in an earlier response, the BET obtained by the applicant was determined according to ISO 5794-1/Annex D, which is a single-point method. ISO 5794-1/Annex D is an industry standard procedure which describes a certain device and the single-point measurement method. In this method, a certain quantity of a substance (in this case silica) is weighed and the amount of liquid nitrogen adsorbed at a atmospheric pressure is measured. A straight line passing through the measured value is also assumed to pass through the zero point. The BET value is determined from the slope of this line. The BET value determined by this method depends in part on the quantity of the silica weighed.

In contrast, in the multi-point method, five readings are generally taken and a straight line is fitted to the values obtained. Once again, the BET value is determined from the slope of this line. In this method, the line is not assumed to pass through the zero value, which in fact is ignored. The five values are five different amounts of liquid nitrogen which are metered in. This method is less dependent on the amount of silica weighed and more dependent on the amounts of liquid nitrogen metered in. In addition, in the multi-point method, the partial pressure is adjusted depending on the amount of liquid nitrogen while in the single-point method it is not.

As also noted in the earlier response, the method by which the determination of BET in Lagarde *et al.* was accomplished is indefinite because the cited literature in column 2, lines 38-42 (*J. Am. Chem. Soc.* **60**, 309, 1938) fails to point out whether the BET was determined by the single-point or a multi-point method. In part because the zero value is ignored and the straight line is not assumed to pass through it, the multi-point method generally leads to higher BET surfaces. The single-point method was used for the determination of the BET surface of the silica according Example 4 in order to make the silica of Example 4 comparable to the silica of the present invention.

For the reasons given above and in the previous responses, claims 16, 17, and 20 are neither anticipated by, or obvious over, Lagarde *et al.* or Johnson *et al.* (U.S. Pat. No.

4,681,750). Therefore, the applicants respectfully request removal of the rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a).

In view of the foregoing, the claims are now believed to be in form for allowance, and such action is hereby solicited. If any point remains in issue that the examiner feels may be best resolved through a personal or telephone interview, the examiner is strongly urged to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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